1. An apparatus for developing failure prediction software for a storage system, comprising:

an editor configured to assist a user in generating a failure prediction algorithm comprising fuzzy logic rules, the failure prediction algorithm stored in a human-readable format;

a code generator configured to generate machine-readable code from the stored failure prediction algorithm;

a test module configured to test the machine-readable code with sample data to produce a result; and

a revision module configured to allow revisions of the failure prediction algorithm such that the result corresponds to an expected result.

2. The apparatus of claim 1, wherein the fuzzy logic rules comprise linguistic variables having less than four terms.

3. The apparatus of claim 1, wherein the test module is further configured to tune the failure prediction algorithm by adjusting a fuzzy variable definition.

4. The apparatus of claim 1, wherein the machine-readable code is configured to execute on a storage system.

5. The apparatus of claim 1, wherein the revision module comprises a text editor configured to revise the failure prediction algorithm.

6. The apparatus of claim 1, wherein the fuzzy logic rules are defined by conditional statements that include subjects, adjectives, and verbs familiar to personnel in the storage system field.

7. An apparatus for predicting component failure within a storage system, the apparatus comprising:

a performance monitor configured to gather performance data for a storage system;

a processor configured to execute a failure prediction algorithm on the performance data to produce a result, the failure prediction algorithm comprising fuzzy logic rules; and

a determination module configured to selectively forecast failure of one or more components of the storage system in response to the result.

8. The apparatus of claim 7, further comprising an interface configured to adjust a predefined quality threshold of the determination module to adjust the degree of data loss risk and remedial costs associated with a forecasted failure of one or more components.

9. The apparatus of claim 8, further comprising an interface configured to adjust a fuzzy variable definition to tune the failure prediction algorithm.

10. The apparatus of claim 9, further comprising a pre-processor configured to pre-process performance data to provide input data for the failure prediction algorithm.

11.   The apparatus of claim 10, wherein the determination module is further configured to map the result from the failure prediction algorithm to one of a plurality of predefined recommendations.

12.   The apparatus of claim 11, further comprising a notification module configured to produce a notification in response to the result.

13.   A system for predicting component failure within a storage system, the system comprising:

a controller configured to control and manage data transactions with a host;

a communication module configured to exchange data between the host and a storage media;

a drive mechanism configured to read data from the storage media and write data to the storage media; and

an analysis module configured to execute machine-readable code programmed to selectively predict failure of the storage media and the drive mechanism in response to a result from a failure prediction algorithm comprising fuzzy logic rules and performance data associated with the storage media and the drive mechanism.

14.   The system of claim 13, wherein the machine-readable code further comprises an interface configured to selectively adjust a fuzzy variable definition to tune the failure prediction algorithm.

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15.   The system of claim 14, wherein the machine-readable code further comprises a pre-processor configured to pre-process performance data to provide input data for the failure prediction algorithm.

16.   The system of claim 15, wherein the machine-readable code further comprises a determination module configured to map a result from the failure prediction algorithm to one of a plurality of predefined recommendations.

17.   The system of claim 16, wherein the machine-readable code further comprises a notification module configured to produce a notification in response to the result.

18.   A method for developing failure prediction software for a storage system, the method comprising:

generating a failure prediction algorithm comprising fuzzy logic rules, the

failure prediction algorithm stored in a human-readable format;

generating machine-readable code from the stored failure prediction

algorithm;

testing the machine-readable code to produce a result; and

selectively revising the failure prediction algorithm such that the result

corresponds to an expected result.

19.   The method of claim 18, wherein the fuzzy logic rules comprise linguistic variables having less than four terms.

20. The method of claim 18, wherein certain linguistic variables comprise less than three terms.

21. The method of claim 18, further comprising tuning the failure prediction algorithm by adjusting a fuzzy variable definition.

22. The method of claim 18, wherein the machine-readable code is configured to execute on a storage system.

23. The method of claim 18, further comprising revising the failure prediction algorithm by way of a text editor.

24. The method of claim 18, wherein the fuzzy logic rules are defined by conditional statements that include subjects, adjectives, and verbs familiar to personnel in the storage system field.

25. A method for predicting component failure within a storage system, the method comprising:

gathering performance data for a storage system;

executing a failure prediction algorithm on the performance data to

produce a result, the failure prediction algorithm comprising fuzzy

logic rules; and

selectively forecasting failure of one or more components of the storage

system in response to the result.

26. The method of claim 25, further comprising tuning the failure prediction algorithm by adjusting a fuzzy variable definition.

27.   The method of claim 25, further comprising mapping the result to one of a plurality of predefined recommendations.

28.   The method of claim 25, further comprising producing a notification in response to the result.

29.   The method of claim 25, further comprising pre-processing performance data to provide input data for the failure prediction algorithm.

30.   An apparatus for developing failure prediction software for a storage system, comprising:

    means for generating a failure prediction algorithm comprising fuzzy logic

        rules, the failure prediction algorithm stored in a human-readable

        format;

    means for generating machine-readable code from the stored failure

        prediction algorithm;

    means for testing the machine-readable code to produce a result;

    means for selectively revising the failure prediction algorithm such that the

        result corresponds to an expected result.

31.   The apparatus of claim 30, wherein the fuzzy logic rules comprise linguistic variables having less than four terms.

32.   The apparatus of claim 30, further comprising means for tuning the failure prediction algorithm by adjusting a fuzzy variable definition.

33.   The apparatus of claim 30, wherein the machine-readable code is configured to execute on a storage system.

34.   The apparatus of claim 30, further comprising means for revising the failure prediction algorithm by way of a text editor.

35.   The apparatus of claim 30, wherein the fuzzy logic rules are defined by conditional statements that include subjects, adjectives, and verbs familiar to personnel in the storage system field.

36.   An article of manufacture comprising a program storage medium readable by a processor and embodying one or more instructions executable by a processor to perform a method for developing failure prediction software for a storage system, the method comprising:

> generating a failure prediction algorithm comprising fuzzy logic rules, the failure prediction algorithm stored in a human-readable format;
>
> generating machine-readable code from the stored failure prediction algorithm;
>
> testing the machine-readable code to produce a result;
>
> selectively revising the failure prediction algorithm such that the result corresponds to an expected result.

37.   The article of manufacture of claim 36, wherein the fuzzy logic rules comprise simple conditional statements that include subjects, adjectives, and verbs that are commonly used to describe error conditions of a storage system.

38. The article of manufacture of claim 37, wherein the method further comprises tuning the failure prediction algorithm by adjusting a fuzzy variable definition.

39. The article of manufacture of claim 38, wherein the method further comprises revising the failure prediction algorithm by way of a text editor.

40. The article of manufacture of claim 39, wherein revising the failure prediction algorithm comprises adding fuzzy logic rules to the failure prediction algorithm.